Use of a discrete choice experiment approach to elicit patients' preferences for hip fracture rehabilitation services as part of a feasibility study

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Title of manuscript

Using a Discrete Choice Experiment (DCE) approach to elicit patients' preferences for hip fracture rehabilitation services as part of a feasibility study.

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Background

Hip fracture is a common health issue in older age. Hip fracture is associated with consequences for the individual such as mortality and frailty. Multidisciplinary rehabilitation has been proposed as a method to help older people recover after a hip fracture. Previous research exploring patients' preferences for hip fracture rehabilitation has been conducted in Australia. However, there is little research in a UK context to inform rehabilitation services.

Methods

As part of a larger feasibility study conducted in North Wales, a Discrete Choice Experiment (DCE) questionnaire was administered to patients who had recently experienced hip fracture and were randomised to receive either usual care or a newly developed multidisciplinary rehabilitation intervention. DCEs are a stated preference technique for eliciting individuals' preferences about goods and services. Individuals make trade-offs between choices, and these trade-offs provide information about individuals' relative preferences for different attributes of a service. Findings from a systematic review, patient focus groups and healthcare professional survey conducted to develop the intervention were used to design the attributes and levels for the DCE questionnaire. Participants who consented to take part in the larger feasibility study were asked to complete the DCE questionnaire at their three-month follow up.

Findings

Thirty-two participants (65%) out of a possible forty-nine completed the DCE questionnaire at follow up. Twenty-two (69%) participants were female, and ten participants (31%) were male. The pilot DCE demonstrated the method could be used with participants with a mean age of 79 years (SD 7.54). Logit regression in STATA indicated participants preferences for increased time with the healthcare professional who delivers rehabilitation (β-coefficient = 0.005, 95% CI: 0.000 to 0.010), and a physiotherapy/occupational therapy assistant to deliver the rehabilitation sessions (β-coefficient = -0.596, 95% CI: -0.862 to -0.445).

Interpretation
Previous DCEs conducted in Australia focused on patient outcomes such as pain and dose of therapy. The design of the DCE described here used attributes associated with service configuration, which could have the potential to inform service implementation and assist service design, incorporating the preferences of patients. It could also provide lessons for future DCEs conducted with similar populations.

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Contributors
NHW is PI of the larger feasibility study. NHW, JLR and NUD conducted the focus groups and professional survey. NUD and JMC conducted the systematic review. JMC and RTE developed the DCE. JMC designed the DCE questionnaire. JMC and STY conducted data analysis and interpreted the results. JMC wrote the abstract with input from JLR, NUD, NHW, STY and RTE. All authors have seen and approved the final version of the abstract. JMC is not an early career researcher.

Conflicts of interest
JMC, JLR, NUD, NHW, STY and RTE authors report grants from NIHR HTA, during the conduct of the study. STY did not receive any direct salary funding from the NIHR HTA. JMC, RTE and NHW report grants from Public Health Wales, outside the submitted work.

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